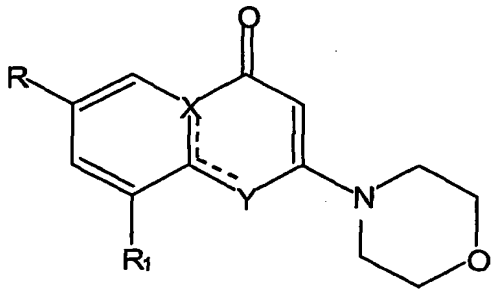
WE CLAIM:

1. A method of disrupting platelet aggregation and adhesion occurring under high shear cpnditions comprising administering an effective amount of a selective PI 3-kinase inhibitor to a patient in need thereof.

2. A method for antithrombosis comprising administering an effective amount of a selective PI 3-kinase β inhibitor to a patient in need thereof,
provided that the inhibitor is not according to formula (II):



(II)

wherein,

R is H, OH, F, Cl, Br, I, C_1-C_6 alkyl, aryl or $(CH_2)_n$-aryl;

R^1 is H, OH, F, Cl, Br, I, C_1-C_6 alkyl, C_3-C_6 cycloalkyl, CH=CH-aryl, C≡C-aryl, $(CHR^3)_n$-aryl, NR^3-C_1-C_6 alkyl, NR^3-cycloalkyl, NR^3-$(CHR^3)_n$-aryl, $(CHR^3)_n$-NR^3-alkyl, $(CHR^3)_n$-NR^3-cycloalkyl, $(CHR^3)_n$-O-aryl, $(CHR^3)_n$-O-alkyl, $(CHR^3)_n$-O-cycloalkyl, O-$(CHR^3)_n$-aryl, S-$(CHR^3)_n$-aryl, or CO-aryl, wherein n is 0, 1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H, CO_2R^3, NO_2, CF_3, substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3, OR^3, OSO_2-aryl, substituted or unsubstituted amine, $NHCOR^3$, $NHSO_2R^3$, $CONHR^3$, or SO_2NHR^3; and

R^3 is H, or substituted or unsubstituted C_1-C_6alkyl, substituted or unsubstituted aryl;

except where the compound of formula (II) is selected from the group consisting of:

9-(3-pyridinylmethyl)oxy-2-morpholinyl-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-140);

7-methyl-9-phenylaminomethyl-2-morpholinyl-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-183);

8-(4-methylphenl)2-)4-morpholinyl)-4(1H)-quinolinone (TGX-113);

8-(4-fluorophenoxy)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-121);

2-morpholinyl-8-(phenylmethyl)-4H-1-benzopyran-4-one (TGX-90);

2-(4-morpholinyl)-8-(4-fluoro-2-methylphenyl)oxy-4H-1-benzopyran-4-one (TGX-184);

9-[[(2-chlorophenyl)-methyl]amino-7-methyl-2-(4-morpholinyl)-4H-pyrido[1,2-a] pyrimidin-4-one (TGX-167);

9-[[(2-methoxyphenyl)-methyl]amino]-7-methyl-2-(4-morpholinyl)-4H-pyrido[1,2-a] pyrimidin-4-one (TGX-137);

7-methyl-2-(4-morpholinyl)-9-[(phenylmethyl)amino]-4H- pyrido[1,2-a] pyrimidin-4-one (TGX-126);

9-[[(4-fluoro-2-methylphenyl)amino]-7-methyl-2-(4-morpholinyl)-4H-pyrido[1,2-a] pyrimidin-4-one (TGX-170);

7-methyl-2-(4-morpholinyl)-9-[[(1R)-1-phenylethyl]amino]-4H-pyrido[1,2-a] pyrimidin-4-one (TGX-123);

7-methyl-2-(4-morpholinyl)-9-[(2-pyridinylmethyl)amino]-4H-pyrido[1,2-a] pyrimidin-4-one (TGX-161);

9-[[(4-chlorophenyl)methyl]amino]-7-methyl-2-(4-morpholinyl)- 4H-pyrido[1,2-a]pyrimidin-4-one (TGX-108);

2-(4-morpholinyl)-9-(phenylmethyl)-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-040);

7-methyl-9-(*N*-Methyl-*N*-phenyl)aminomethyl-2-(4-morpholinyl)-4H-pyrido[1,2-a]pyrimidin-4-one (TGX-195);

2-(4-morpholinyl)-8-(phenylmethyl)oxy-4H-1-benzopyran-4-one (TGX-102);

2-(4-morpholinyl)-8-(phenylmethyl)amino-4H-1-benzopyran-4-one (TGX-204);

2-(4-morpholinyl)-8-phenylamino-4H-1-benzopyran-4-one (TGX-324);

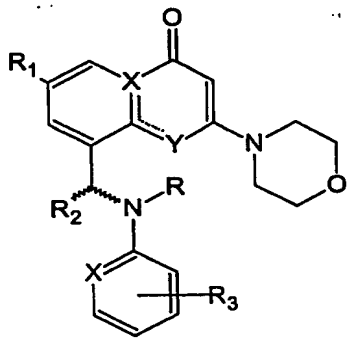
8-(3-chlorophenyl)oxy-2-(4-morpholinyl)-4H-1-benzopyran-4-one (TGX-259);

8-(3-methylphenyl)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-127);

8-(2-fluorophenyl)-2-(4-morpholinyl)-4(1H)-quinolinone (TGX-143);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(3-pyridinylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (KN-304).

3. The method of claim 2, wherein the selective PI 3-kinase β inhibitor is according to formula (I):



(I)

wherein,

R is H, C_1-C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$-aryl;

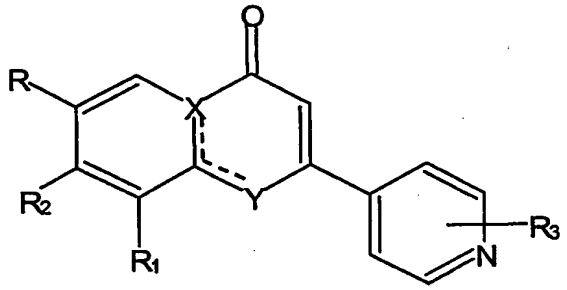
R_1 is H, OH, OCH_3, OCF_3, F, Cl, CF_3, C_1-C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$-aryl;

R_2 is H, C_1-C_6 branched or straight chain alkyl, or aryl or $(CH_2)_n$-aryl in either the R or the S configuration

R_3 is one or more of H, F, Cl, Br, I, CN, CO_2H, CO_2R, NO_2, CF_3, substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCH_3, OCH_2F, $OCHF_2$, OCF_3, OR, OSO_2-aryl, substituted or unsubstituted amine, NHCOR, $NHSO_2R$, CONHR, or SO_2NHR

X is C or N and Y is N or O.

4. The method of claim 2, wherein the selective PI 3-kinase β inhibitor is according to formula (III):



(III)

where X and Y are C and O respectively, or C and NH respectively, or both N.

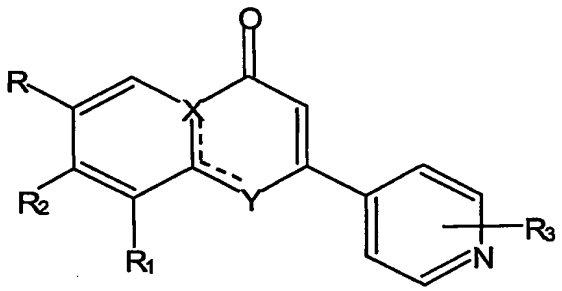
R is H, OH, OCH_3, OCF_3, F, Cl, Br, I, C_1-C_6 alkyl, aryl or $(CH_2)_n$-aryl;

R_1, R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1-C_6 alkyl, C_3-C_6 cycloalkyl, CH=CH-aryl, C≡C-aryl, $(CHR'^3)_n$-aryl, NR'^3-C_1-C_6 alkyl, NR'^3-cycloalkyl, NR'^3-$(CHR'^3)_n$-

aryl, $(CHR'^3)_n$-NR'^3-aryl, $(CHR'^3)_n$-NR'^3-alkyl, $(CHR'^3)_n$-NR'^3-cycloalkyl, $(CHR'^3)_n$-O-aryl, $(CHR'^3)_n$-O-alkyl, $(CHR'^3)_n$-O-cycloalkyl, O-$(CHR'^3)_n$-aryl, S-$(CHR'^3)_n$-aryl, or CO-aryl, wherein n is 0,1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H, $CO_2R'^3$, NO_2, CF_3, substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3, OR'^3, OSO_2-aryl, substituted or unsubstituted amine, $NHCOR'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$; and

R'^3 is H, or substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted aryl.

5. A compound having the following formula (III):



(III)

where X and Y are C and O respectively, or C and NH respectively, or both N.

R is H, OH, OCH_3, OCF_3, F, Cl, Br, I, C_1-C_6 alkyl, aryl or $(CH_2)_n$-aryl;

R_1, R_2 and R_3 are independently H, OH, F, Cl, Br, I, C_1-C_6 alkyl, C_3-C_6 cycloalkyl, CH=CH-aryl, C≡C-aryl, $(CHR'^3)_n$-aryl, NR'^3-C_1-C_6 alkyl, NR'^3-cycloalkyl, NR'^3-$(CHR'^3)_n$-aryl, $(CHR'^3)_n$-NR'^3-aryl, $(CHR'^3)_n$-NR'^3-alkyl, $(CHR'^3)_n$-NR'^3-cycloalkyl, $(CHR'^3)_n$-O-aryl, $(CHR'^3)_n$-O-alkyl, $(CHR'^3)_n$-O-cycloalkyl, O-$(CHR'^3)_n$-aryl, S-$(CHR'^3)_n$-aryl, or CO-aryl, wherein n is 0,1, or 2 and alkyl, cycloalkyl or aryl is optionally substituted with F, Cl, Br, I, CN, CO_2H, $CO_2R'^3$, NO_2, CF_3, substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCF_3, OR'^3, OSO_2-aryl, substituted or unsubstituted amine, $NHCOR'^3$, $NHSO_2R'^3$, $CONHR'^3$, or $SO_2NHR'^3$; and

R'^3 is H, or substituted or unsubstituted C_1-C_6 alkyl, substituted or unsubstituted aryl.

6. The method of claim 2, comprising administering the 2-morpholino-substituted derivative of formula (I) wherein:

R is H, C_1-C_6 branched or straight chain alkyl or aryl;

R_1 is H, OH, OCH_3, OCF_3, F, Cl, CF_3, C_1-C_6 branched or straight chain alkyl;

R_2 is H, C_1-C_6 branched or straight chain alkyl, or aryl in either the R or the S configuration

R_3 is one or more of H, F, Cl, Br, CN, CO_2H, CO_2R, NO_2, CF_3, branched or straight chain C_1-C_6 alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted aryl, OCH_3, OCH_2F, $OCHF_2$, OCF_3, OR, substituted or unsubstituted amine, NHCOR, $NHSO_2R$, CONHR, or SO_2NHR

X is C or N and Y is N or O.

7. The method of claim 2, wherein the inhibitor administered is selected from the group consisting of:

(±)-7-methyl-9-{[methyl(phenyl)amino]methyl}-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-195);

(±)-7-methyl-2-morpholin-4-yl-9-(1-phenylaminoethyl)-pyrido[1,2-a]pyrimidin-4-one (TGX-221);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(4-fluorophenylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-224);

(±)-9-[1-(3,4-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-237);

(±)-9-[1-(2,5-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-238);

(±)-9-[1-(3,5-difluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-239);

(±)-9-[1-(4-fluoro-2-methylphenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-240);

(±)-9-[1-(4-chlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-243);

(±)-9-[1-(3,4-dichlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-244);

(±)-9-[1-(3fluorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-247);

(±)-9-[1-(3-chlorophenylamino)ethyl]-7-methyl-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-248);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(2-thiazolylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-261);

(±)-7-methyl-9-[1-(3-methylphenylamino)ethyl]-2-morpholin-4-yl-pyrido[1,2-a]pyrimidin-4-one (TGX-262);

(±)-7-methyl-2-morpholin-4-yl-9-[1-(3-trifluoromethylphenylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-264); and

(±)-7-methyl-2-morpholin-4-yl-9-[1-(2-pyridinylamino)ethyl]-pyrido[1,2-a]pyrimidin-4-one (TGX-295).

(±)-2-({1-[7-methyl-2-(morpholin4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl} amino)benzoic acid (KN-309);

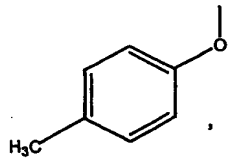
(±) methyl 2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzoate (KN-321);

(±)-2-({1-[7-methyl-2-(morpholi-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzonitrile (KN-320);

(±)-7-methyl-2-(morpholin-4-yl)-9-(1-{[2-(2*H*-tetrazol-5-yl)phenyl]amino}ethyl)-pyrido[1,2-a]pyrimid-4-one (KN-325);

(±)-2-(4-morpholinyl)-8[1-(phenylamino)ethyl]-4H-1-benzopyran-4-one (TGX-280).

8. The compound of claim 5, wherein R^1 is selected from a group consisting of, CH_3, C_2H_5,



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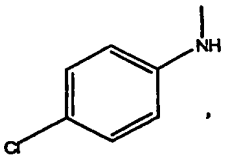

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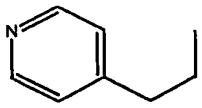

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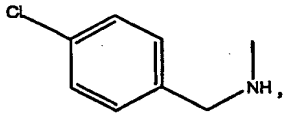

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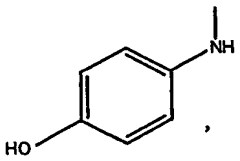

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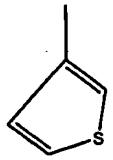

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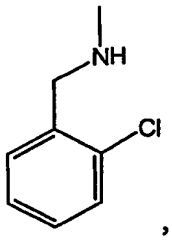

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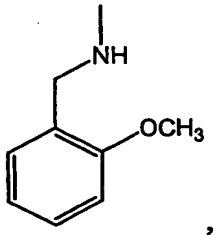

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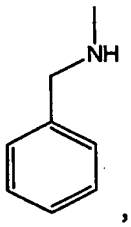

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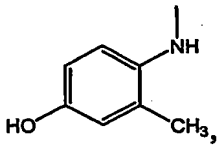

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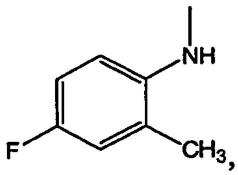
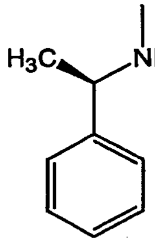
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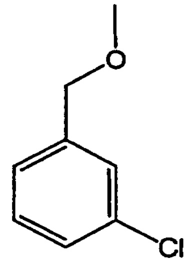
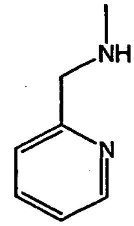
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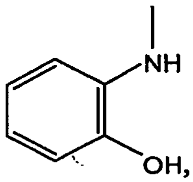
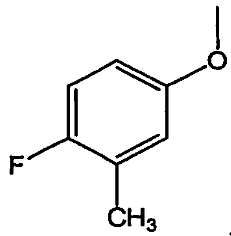
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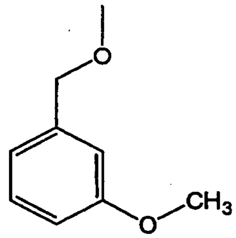
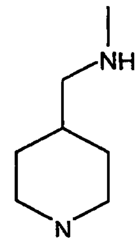
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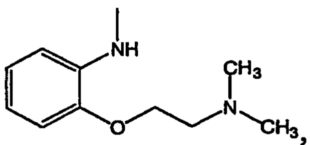
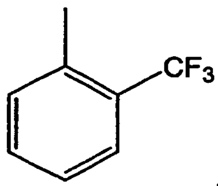
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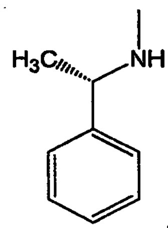
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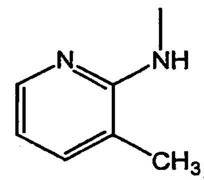

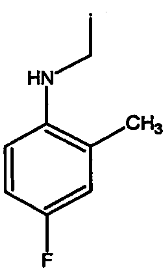
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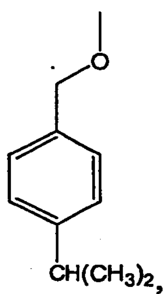
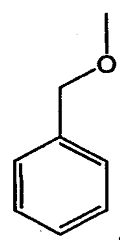
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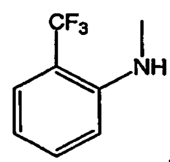
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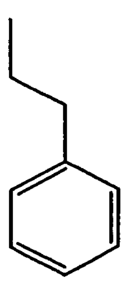
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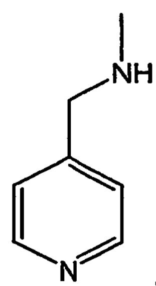
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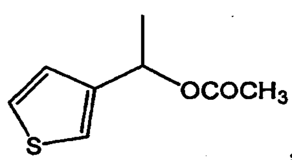
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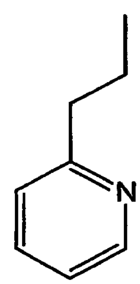
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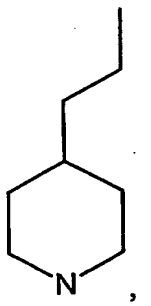
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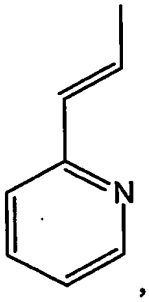
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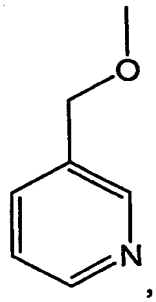
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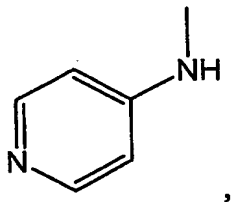
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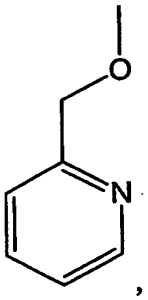
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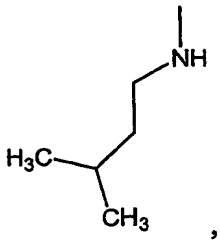
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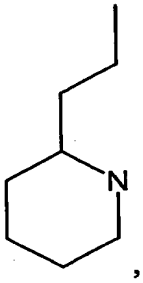
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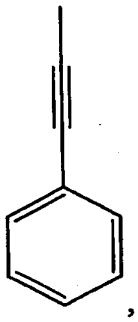
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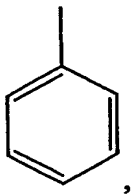
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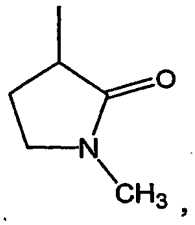
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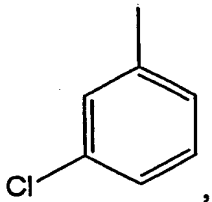
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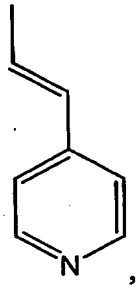
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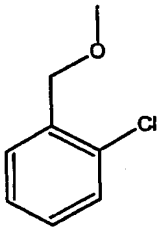
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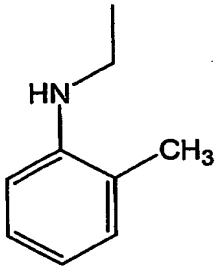
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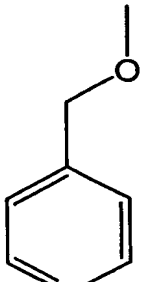
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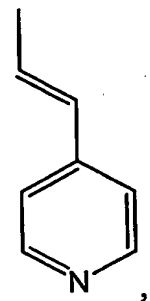
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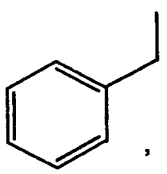
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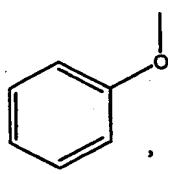
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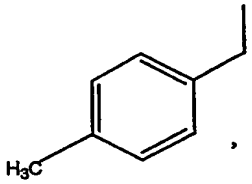
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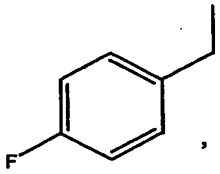
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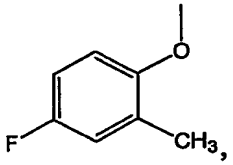
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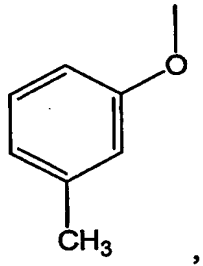
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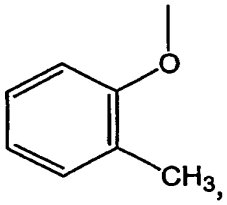
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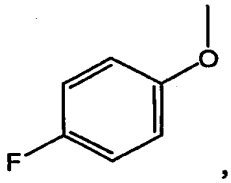
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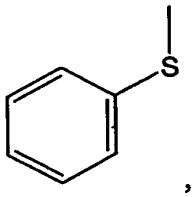
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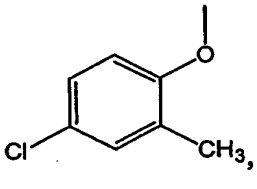
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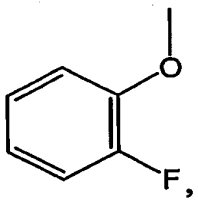
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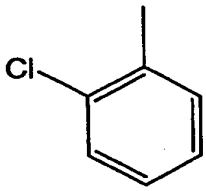
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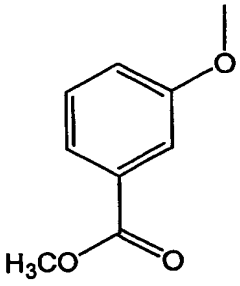
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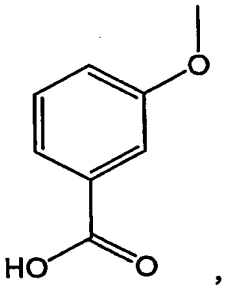
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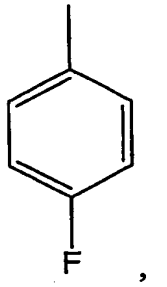
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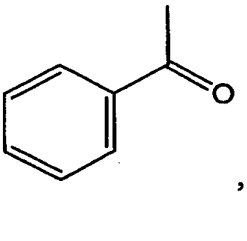
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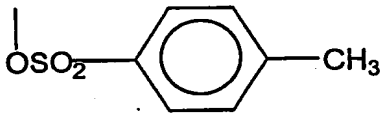
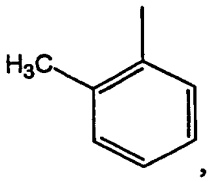
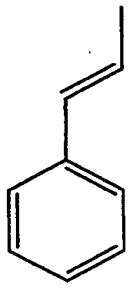
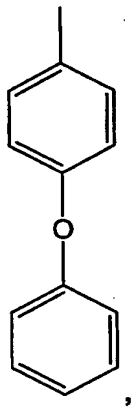
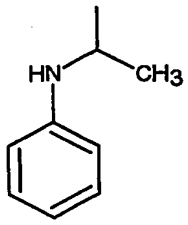
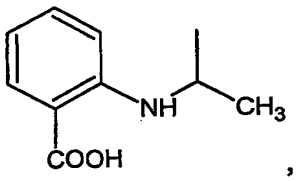
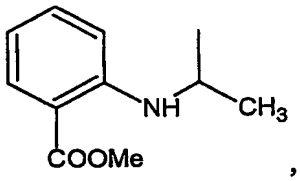
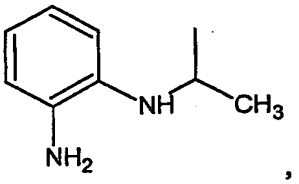
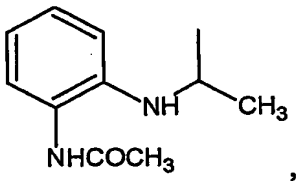
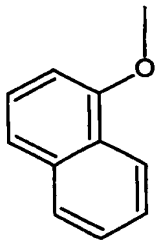
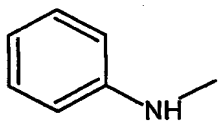
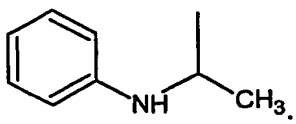
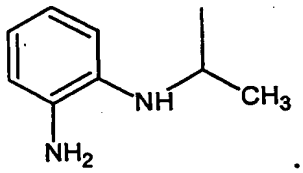


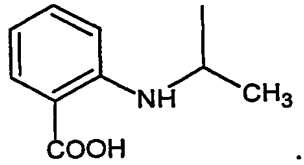
9. The compound of claim 5, wherein R is methyl and R^1 is



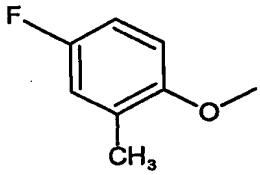
10. The compound of claim 5, wherein R is methyl and R^1 is



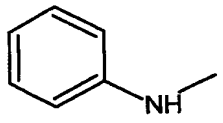
11. The compound of claim 5, wherein R is methyl and R^1 is



12. The compound of claim 5, wherein R is H and R^1 is



13. The compound of claim 5, wherein R is H and R^1 is



14. A method for inhibiting phosphoinositide 3-kinase in a patient, comprising administering to a patient an amount of the compound of claim 5 effective in inhibiting the phosphoinositide 3-kinase in the patient.

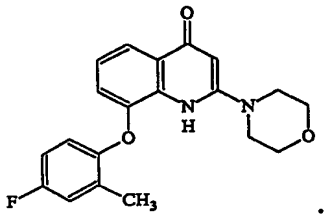
15. A method for preventing or treating cardiovascular disease comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

16. A method for preventing or treating respiratory disease comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

17. A method for preventing or treating cancer comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

18. A method for preventing or treating disease linked to disordered white blood cell function comprising administering an effective amount of the compound of claim 5 to a patient in need thereof.

19. The method of claim 2, wherein the inhibitor administered is:



20. The method of claim 4, wherein the inhibitor administered is 6-methyl-8-[1-(phenylamino)ethyl]-2-(4-pyridinyl)-4*H*-benzopyran-4-one.

21. The method of claim 4, wherein the inhibitor administered is 6-methyl-8-{1-[(2-aminophenyl)amino]ethyl}-2-(4-pyridinyl)-4*H*-benzopyran-4-one.

22. A compound which is (±)-7-methyl-2-morpholin-4-yl-9-(1-phenylaminoethyl)-pyrido[1,2-a]pyrimidin-4-one.

23. A compound which is (±)-2-({1-[7-methyl-2-(morpholin4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl} amino)benzoic acid.

24. A compound which is (±)-2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzonitrile.

25. A compound which is (±) methyl 2-({1-[7-methyl-2-(morpholin-4-yl)-4-oxo-pyrido[1,2-a]pyrimidin-9-yl]ethyl}amino)benzoate.

26. A compound which is (±)-7-methyl-2-(morpholin-4-yl)-9-(1-{[2-(2*H*-tetrazol-5-yl)phenyl]amino}ethyl)-pyrido[1,2-a]pyrimid-4-one.